

Generative AI and Labor: Power, Hype, and Value at Work

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Executive Summary

As with other waves of automation, there has been immense hype around generative AI's purported potential to transform how we work. Generative AI is a subset of AI that uses a particular type of machine learning to produce content such as text or images without preset instructions. Media speculation has focused on whether and how AI can either “augment” work or drive mass unemployment. However, looking at generative AI's impact on different industries reveals a more complicated story. Understanding how AI will affect work requires looking at how work is organized, how industries are structured, and whose work and what work is valued. *Generative AI and Labor: Power, Hype, and Value at Work* integrates workers' current and material experiences into public discourse and questions promotional language about the capabilities and seeming inscrutability of AI. Importantly, a narrow and interconnected cast of AI companies are shaping the future of generative AI, its intended uses, and long-term impact. At the same time, workers' agency is often framed as merely a choice to either harness its power or be “left behind.”

This primer is divided into three parts, each addressing a different dimension of generative AI's labor impact. First, we define generative AI and discuss its different iterations as work technologies, and interrogate assumptions and claims about its capabilities. Part Two highlights how labor is critical to the development and continued expansion of generative AI technologies. Lastly, Part Three examines how generative AI's integration into workplaces converges with existing practices of algorithmic management, data extraction, and struggles over agency and control. The summary below highlights key points from each section:

- The public availability and hype over applications like ChatGPT and Midjourney are only one form that generative AI takes, while enterprise applications of generative AI will likely have the greatest impact on workers. The narratives used to describe generative AI can elide its real capabilities, particularly in overstating claims about its abilities to replicate workers' knowledge and expertise. Moreover, generative AI's limitations and unresolved legal and ethical challenges raise serious questions about what principles we are willing to give up in the pursuit of innovation.
- AI is dependent on human labor, including data workers, creators whose content is amassed for training AI, and workers whose digital likenesses and voices are commodified and reproduced. AI development often relies on the exploitation of legal gray areas, whether by skirting labor laws in host countries where data work is outsourced, bypassing copyright and licensing protections, or disregarding consent with regards to workers' digital likenesses. These workers share common challenges over pay and compensation, a loss of control around when and how one's data is used, and struggles to build collective responses among isolated and often precarious workers.

- Generative AI does not exist outside of current economic conditions of industries and their attendant inequalities and power dynamics. As employers integrate generative AI into workplaces, their application can obscure new dynamics of extraction, devalue human labor, and build on older practices of algorithmic control. In some cases, the outputs of generative AI require considerable human input in order to appear to be labor-saving, even as they enable employers to justify cost-cutting practices. Moreover, distinctions between technologies that augment work and those that manage workers may be further blurred with the growing use of AI assistants.
- If future advancements in AI will rely on the extraction of more work data, this is a pivotal moment. Generative AI will continue to raise new challenges around expertise, compensation, accountability, and professional ethics. Human labor is often devalued and reduced to data, suggesting a need to envision more expansive rights and protections for workers. Such unequal impact across industries will require a broader range of actors to address workers' relationship to AI, particularly for industry-specific concerns such as setting ethical and professional norms and workplace standards.

Introduction

At the end of 2023, OpenAI hosted their DevDay, a one-day conference to celebrate the success of ChatGPT and launch new features built on GPT-4o, the latest foundation model from OpenAI. The conference began with a two-minute video that featured the voices of people using ChatGPT. One artist talked about how the interface helps them communicate with their Filipino father in a loving but respectful way, while another artist claimed that ChatGPT helped him unlock new levels of creativity. A student and mother, short on time, used ChatGPT to help her study more efficiently so she could spend time with her family. A centenarian used ChatGPT for companionship, while a coder found it made their work easier and faster, freeing their mind from mundane tasks so they could be more innovative. The unspoken part of this video is that a myriad of jobs, from translators to tutors to coders, can and should be enhanced by artificial intelligence (AI) to free up time for humans to engage in more meaningful activities.

As with other waves of automation, there has been immense hype around generative AI. In the past, machines were lauded for their capacity to work harder and faster than humans, without rest or pay. Generative AI models that power applications like ChatGPT, Midjourney, and Copilot are hailed as the next revolution in work automation: intelligent and creative, capable of producing compelling stories, effective code, and hyper-realistic artwork that mimics human creativity in a fraction of the time.

Generative AI has the potential to transform many aspects of work, particularly as it evolves and new uses are introduced. This has led to a variety of economic predictions, ranging from mass job losses to huge economic and social gains.¹ Proponents have argued that broad consumer access to generative AI tools would lower the barrier to entry across occupations.² A World Economic Forum report, for instance, argues that generative AI could mitigate racial and gender inequalities by bridging “opportunity gaps” for populations lacking access to formal digital skills training and literacy education.³ OpenAI CEO Sam Altman claimed that generative AI would create entirely new jobs.⁴ For a time, the “prompt engineer” — a role focused on writing effective queries for tools like ChatGPT — was touted as a new, high-demand tech role that did not require a computer engineering degree but could reap six-figure salaries for its practitioners.⁵ In *Fortune* and other outlets, stories speculated that prompt engineers would absorb other occupations, leaving behind those who failed to learn.⁶

But AI is neither just a story about displacement, nor is it just about “augmentation” of work. As with past forecasts of mass AI-driven unemployment, such major economic disruptions have failed to materialize. Rather, the introduction of AI often changes how work is organized, how industries are structured, introduces new extractive dynamics, and shifts ideas about whose work and what work is valuable.

Moreover, there is no guarantee that economic and social gains will be distributed equally. Optimistic predictions can also obscure the true impact on humans who are implicated in the development and implementation of AI in the workplace. AI is dependent on human labor, not just for the initial development of generative AI, but for its future advancement. AI is built on extracting various forms of worker data, harvesting information from those workers who train, fix, and build generative AI; creative workers whose content is taken to train foundation models; workers whose images and biometrics are commodified; and workers across many industries who have little agency over how and if generative AI models are integrated into their workflows. This means that embedding AI in the workplace is critical to the long-term advancement of AI technology, which requires constant sources of new data.

This primer seeks to reinsert workers’ current and material experiences into the public discourse and question promotional language about the magical, infallible, and seemingly inscrutable qualities of AI. In Part One, we define generative AI and discuss its different iterations as work technologies, and interrogate assumptions and claims about its capabilities. In Part Two, we draw connections between different global dimensions of data labor, and how the underlying data behind generative AI technologies impact workers’ livelihoods. In Part Three, we situate generative AI in the context of workplace adoption and identify how it is distinct from and connected to other forms of work automation.

Part One: What is Generative AI?

The Fuzziness of AI

The term artificial intelligence has been so overused that it's difficult to clearly define what qualifies as an "intelligent" system. In computer science, intelligence is characterized by its ability to learn, solve problems, and adapt to contexts. Achieving this goal draws on a wide range of disciplines, including computer science, psychology, neuroscience, and economics.⁷ These research areas have created robotics and programs with varying degrees of capability that may seem cognizant because they can accomplish tasks independently. This does not mean these systems are truly intelligent. Robots can easily locate items in a factory and deliver them to the appropriate individual, and algorithms can quickly match riders with drivers, but neither is considered intelligent because it cannot solve problems on its own. Instead, both systems use rule-based automated systems focused on pattern recognition. Generative AI, however, uses a particular type of machine learning that is trained on millions of pieces of data to identify patterns without preset instructions.⁸

Recent advances in computation power, model architecture, and machine learning techniques that enable AI systems to be trained on unlabeled data have made it possible to scale AI, dramatically improving and expanding its capability. Generative AI is a subset of AI that uses a particular type of machine learning capable of making associations from millions of pieces of data to generate images or predict the next word in a sequence without preset instructions. Also called foundation models, generative AI models are trained on unlabeled data, the vast majority of data available on the internet. Foundation models can serve as the building blocks for text, audio, or visual applications. Since these models were trained using multiple forms of data, they can transform text to image, text to video, or text to audio. Large language models (LLMs) are a type of foundation model on which applications like ChatGPT, Gemini, and Claude are built. Diffusion models, another type of foundation model, are capable of generating images and audio. Recognizable applications built on these

models include DALL-E, Midjourney, Stable Diffusion, and Sora. Despite their adeptness at predictions, generative AI cannot judge the quality of the data ingested or the content produced. Human data workers help fine-tune datasets, known as reinforcement learning from human feedback, which is needed to further refine a model to choose better responses and “de-prioritize” toxic or incorrect answers.⁹

This type of AI is useful when the task at hand requires learning, adapting, and creating from data. However, generative AI’s “intelligence” is likewise limited; while it can emulate outcomes of human understanding and thought processes, it merely responds to prompts by summarizing content based on massive amounts of input data. These constraints have implications for understanding the type of work that it can automate.¹⁰

As a consequence, AI has become a catch-all marketing term to refer to a wide swathe of technologies, some of which may not include any form of machine learning. It has been used to describe everything from chatbots to robotics to detection systems like facial recognition cameras. Developers and venture capitalists are incentivized to make technology appear intelligent because claiming to employ AI can attract more funding. According to a study conducted by MMC, a venture capital firm based out of London, 40 percent of surveyed European start-ups that were classified as AI companies did not use any form of machine learning in ways that were significant to their business.¹¹

Recently, Amazon’s decision to discontinue its cashierless checkout was widely criticized for hiding that it relied on nearly 1,000 workers in India who reviewed the majority of transactions. When Amazon first debuted the technology, it promised shoppers that AI-powered cameras would let them shop and pay without ever having to talk to another human or wait in line.¹² This example is not uncommon. Technology companies often use human labor to create the illusion of autonomous and intelligent systems. As scholar Milagros Miceli observes, “Using data workers instructed to ‘think and act like machines’ is not unheard of, nor is it a result of flawed technology. It is part of the business design of many start-ups.”¹³

The development of AI relies on a large global network of data workers who have been purposely made invisible in order to make systems appear more autonomous, even sentient. OpenAI flaunts that GPT, its LLM, is trained on millions of data points scraped from the internet, but hides the fact that workers must make this data suitable for training. Workers perform a wide set of tasks including cleaning, labeling, keywording, and semantic segmentation.¹⁴ These practices convince the general public that there are more AI systems in use than there actually are, while obfuscating the difference between a basic algorithm and more complex systems like generative AI. However, there is a difference, and its impact on work and labor are important to recognize.

What Does Generative AI Do?

Generative AI’s potential immersion into our everyday lives and its ensuing impact are still unfolding. However, the wide range of applications built on generative AI architecture fuels public interest in AI. As a consumer tool, it has thus far been a novelty, a tool for people to

experiment with. Anecdotal evidence shows that the tool’s utility is still limited to drafting emails, assisting with tutoring, and general queries.¹⁵ Even so, events like the 2023 Writers Guild of America strike, during which entertainment studios claimed that LLMs could replace skilled writers, made generative AI a full-fledged labor concern.¹⁶

Media reporting often describe those most affected by generative AI as “creative workers,” implying that generative AI can generate new information or act creatively. But this misrepresents the ability of generative AI, and downplays the many human skills and knowledge that AI purports to automate. Rather, understanding generative AI’s ability to recognize forms of tacit knowledge provides a clearer and more concrete way to understand the automation of skills. In a study on call center use of generative AI, researchers Erik Brynjolfsson, Danielle Li, and Lindsey R. Raymond, describe tacit knowledge as:

The knowledge and skills that individuals possess but are unable to express explicitly. It is often intuitive and nonverbal, acquired through personal experiences, observations, and practice over time. Tacit knowledge is deeply ingrained in an individual’s behavior and can be difficult to transfer or convey to others through traditional methods such as training or manuals.¹⁷

Generative AI models can recognize patterns in data, such as transcripts of call center interactions, to identify the language workers use to build rapport with customers. When prompted, generative AI applications will replicate these elements in outputs, suggesting that some form of human ingenuity or creativity was required to generate these responses. However, generative AI models do not understand the motives, meaning, and context behind interactions, such as easing a customer’s frustrations while troubleshooting a problem. Workers’ tacit knowledge gained through customer service experience is embedded in the language that AI systems appropriate. Reorienting our understanding of the type of labor or skill that generative AI is able to achieve, from creativity to replication of tacit knowledge, gives us a wider view of how occupations may be affected.

The Forms Generative AI Takes

The foundation models at the center of generative AI can be used to accomplish a variety of tasks, such as content creation, research and summarization, and task automation.¹⁸ Given the wide range of tasks it can accomplish, various applications can be built on top of the model, such as chatbots and image generators. Users interact with these applications, not directly with generative AI models. While consumer-facing tools like ChatGPT and Midjourney are currently the most familiar forms of generative AI, companies that make software for office work, like Zoom, Slack, Office 365, and Notion, are rapidly integrating generative AI into their products. Zoom users can opt into AI-generated transcripts of meetings as well as synthesis of the meeting discussion.¹⁹ Companies using Slack for communication and project management can query answers from across the entire organization’s users.²⁰ Public institutions are also enticed by the promises of a more efficient and responsive government. New York City is already experimenting with an AI chatbot to answer business inquiries about city rules and regulations.²¹ A study by GitHub of developer satisfaction with Copilot

found that coders thought the application offered value by automating repetitive and boring tasks, allowing them to focus on more “meaningful” work.²² In these cases, applications purportedly enhance worker productivity by automating some aspects of work. These applications may still have downstream effects, such as displacing transcriptionists or reducing the total amount of labor hours needed within a particular sector.

Other institutions intend to use generative AI to significantly change their business operations. For example, Duolingo has reached an agreement with OpenAI to potentially develop chatbots and other tools to spur more and “better” customized conversations with learners.²³ Call center companies are creating chatbots to guide workers, which could potentially replace human call center workers in the future.²⁴ Adobe Creative Cloud is integrating AI into its suite of graphic design tools amid fears of job displacement for designers.²⁵ Nevada will use AI to adjudicate appeals for unemployment benefits due to a large backload because of the pandemic. The state’s partnership with Google estimates that automating this process could reduce the amount of time it takes to render a decision from several hours to mere minutes.²⁶ These instances reflect more extensive automation of work responsibilities central to business operations — making benefits determinations, fielding customer service requests, and teaching users how to converse in a foreign language — potentially displacing workers.

The following table categorizes applications of generative AI although there are overlaps as automation is not straightforward. Some applications may be marketed as augmentative, such as Adobe AI, but the company is also offering an enterprise model to large corporations. The line between augmentation and automation is thin, and the tipping point is determined by who controls the technology and who has a choice in its use.

Types of Generative AI Applications in the Workplace

	Consumer-facing tools	Integration into existing work applications	Specialized enterprise tools
Examples of applications	ChatGPT, Midjourney, DALL-E, Gemini	Zoom AI, Slack AI, Microsoft GitHub Copilot, Adobe AI	Duolingo AI chatbot, Call center chatbots, State of Nevada benefits adjudication
Data inputs to fine-tune the application	User-inputted data	May include company’s user data such as documents, instant messages, code, and images	Industrial data collected on the job such as client-worker conversations, constituent data
Uses	General: For individual consumer use such as drafting emails, image-generation, and general queries	Augmentation: Applications assist users with specific functions such as code automation, transcription and summarization, workflow management	Automation: Application designed to significantly automate work that benefits the larger institution

Major tech companies have also begun introducing AI agents, another layer of automation, into mainstream use. AI agents are given more autonomy to interact with their surroundings, gather data from sensors and other inputs, and perform tasks independently, without needing instructions. One example is customer chatbots that can respond to questions, process transactions like issuing refunds, and escalate problems to a human agent if necessary.²⁷ Generative AI is taking many forms to appeal to a wide audience; however, not all uses of AI are appropriate, and failure to understand the limitations and contexts for the technology can have economic, legal, and social implications.

The Actors Behind Generative AI

With the release of an early demo of OpenAI's chatbot, ChatGPT, AI suddenly became available to a large segment of the population. The easy-to-use application quickly gained attention and just three months later, OpenAI reported over 100 million active users.²⁸ Within six months, Anthropic's Claude, Google's Gemini, and Meta's LLaMa were all publicly released. The rise of generative AI introduces a new set of actors into the tech space, including high-profile companies like OpenAI, Anthropic, and Hugging Face.

These companies join established tech giants like Google, Microsoft, Amazon, and Facebook in developing AI models. Although research labs DeepMind, OpenAI, and Anthropic began with a social mission, these entities quickly became intertwined with larger tech corporations. In 2015, OpenAI, for example, started as a nonprofit organization with a mission of "ensuring that artificial general intelligence benefits all of humanity." Four years later, it created a capped for-profit entity which allowed it to attract funding to hire more talent and purchase more computational power, according to the company's CEO.²⁹ This transition saw OpenAI develop a strong relationship with Microsoft, its first big funder, serving as the former's exclusive cloud provider, and coordinating research and product development.³⁰

These close relationships and high-value funding from major tech players are typical of the landscape. Anthropic, started in 2021 by two former OpenAI executives, is heavily funded by Google and Amazon, to the tune of \$6 billion. Amazon will also serve as Anthropic's primary cloud provider.³¹ DeepMind was acquired by Google in 2014. Hugging Face is valued at \$4.5 billion, with significant investments from Google and Nvidia.³² As AINow explains, the competition for computing power and microchips is so intense that these monopolistic relationships are almost inevitable.³³ However, such close relationships should draw skepticism about the independence of these start-ups and concerns of further consolidation within the tech sector.³⁴ These narrow and interconnected casts of actors are shaping the future of generative AI, its intended uses, and long-term impact.

Limitations and Concerns

AI and automation technologies are transforming work, but it is increasingly clear that while these tools are powerful, they have significant limitations. These limitations introduce risks and affect the quality and accuracy of results. Additionally, how we choose to use and regulate AI has significant social implications.

One of the most discussed problems with generative AI is the tendency of the technology to “hallucinate,” or produce outputs that are false or made up. New York City’s AI chatbot, for example, dispensed false information that could have resulted in companies breaking laws, theft of workers’ tips, residents losing critical affordable housing, and the city failing to enforce its own laws. In another instance, a judge determined that an airline had to honor a decision made by its AI chatbot although it conflicted with the airline’s own policies.³⁵ Researchers Sourav Banarjee, Ayushi Agarwal, and Saloni Singla argue that hallucinations are not just infrequent mistakes, but inherent in LLMs, raising questions about the soundness of a key feature of the technology.³⁶ On the other hand, researchers have also identified the problem of “plagiaristic outputs” whereby LLMs repeat, near-verbatim, text from training data.³⁷ LLMs’ inconsistencies in identifying sources of information contribute to this problem.

Despite the insistence of AI companies that information on the internet is “fair use” and that foundation models don’t plagiarize, this is actively being challenged in court by creators and companies like *The New York Times*, which have seen their work scraped to train models. As of October 2024, over 30 lawsuits have been filed against AI companies.³⁸ In addition to legality, generative AI raises important questions of ownership, privacy, autonomy, and professionalism. Many creators — writers, artists, musicians, journalists, and others — are rightly infuriated by the illegal scraping of their life’s work to build foundation models. Their work was taken without consent, compensation, or acknowledgment. Some creators are also witnessing the theft of their identities and reputation, as generative AI produces work based on their styles, sometimes using their names. This raises ethical concerns about what principles we are willing to give up in the pursuit of innovation.

In addition, generative AI’s inability to judge the quality of data raises concerns of bias. Most foundation models are trained on unfiltered and unlabeled data from the entirety of the internet, which is rife with bias, prejudice, and stereotypes. Generative AI’s inability to parse nuance and relational complexities that are central to a person’s job, and limited scope of understanding of work-related situations, directly affects how it will be implemented in the workplace.

With the release of each new version of an AI product, there is an underlying promise of infinite improvement — that limitations and biases will be fixed as we get one step closer to artificial general intelligence (AGI). New research shows that when AI models are trained on AI-generated data, the quality of the model’s output gradually degrades, an effect that gets worse as the output of subsequent models is also used as training data.³⁹ There is a growing circularity in knowledge production of generative AI tools. For example, AI search engine Perplexity was found to use AI-generated articles as an information source.⁴⁰ Given this limitation, there is a strong incentive to identify and extract other forms of data, including industrial data from workers.

As Part Three of this primer argues, these limitations and concerns intersect with economic and social decisions about when to use generative AI in the workplace and the resulting impact.

Part Two: AI's Dependence on Human Labor

There are major power imbalances between the small concentration of companies with the capital and resources to build and profit from AI systems, and the people whose data labor supports their production. The latter includes the millions of individuals whose materials are scraped into AI datasets: the writers, artists, photographers, and others whose work is commodified and scraped or sold by companies; the various workforces whose own digital likenesses are collected and reproduced; and the workers who train and build AI systems. While these workforces span sectors and geographies, they have many issues in common. These include challenges over pay and compensation, a loss of control around when and how one's data is used, and struggles to build collective responses among isolated and often precarious workers in a rapidly changing marketplace of AI products. AI development also often relies on the exploitation of legal gray areas, whether by skirting labor laws in host countries where data work is outsourced or bypassing copyright and licensing protections to acquire more data.

Data work and the commodification of workers' data is far from new.⁴¹ Terms like “data colonialism” and “data capitalism” have been used to describe the extractive dynamics that have created a global economic model based on the conversion of massive amounts of data into commercial profits.⁴² This section considers how generative AI is built on human labor, and how the underlying business models have an impact on workers' livelihoods, working conditions, and avenues for challenging growing power imbalances between AI companies and workers.

Amassing Content for Training Data

Generative AI models depend on vast amounts of data taken from multiple sources. For example, in order to develop AI image generators, developers scraped millions of images from sites like Flickr, DeviantArt, Instagram, and Getty Images. Workers in creative and other industries are responding to the accelerated and systematic use of their content without their knowledge, consent, or compensation. Some have called on the industry to take the high road. The Authors Guild published an open letter calling on OpenAI, Alphabet, Meta, Stability AI, IBM, and Microsoft to “obtain consent, credit, and fairly compensate writers for the use of copyrighted materials in training AI.”⁴³ In response to rampant web scraping of such materials by AI companies, some media organizations have responded by blocking AI web crawlers.⁴⁴ Another proposal from regulators has been the application of “algorithmic disgorgement,” an enforcement strategy that would require companies to delete products built on ill-gotten data.⁴⁵

Others have turned to legal challenges through copyright and licensing lawsuits. For instance, an ongoing class action lawsuit brought by several artists alleges that AI image generators used their artwork in training datasets without consent or compensation.⁴⁶ Meanwhile, generative AI companies have largely prevaricated about the provenance of their training data. OpenAI chief operating officer Brad Lightcap refused to say whether Sora, its text-to-video model, was trained on YouTube content.⁴⁷ At the same time, YouTube creators filed a class action lawsuit against OpenAI for using their transcripts,⁴⁸ and an investigation from *Proof News* found that more than 48,000 YouTube channels were used by companies like Anthropic and Nvidia to train their AI models.⁴⁹

Writers and content creators have been among the first to feel the impact of generative AI applications as a labor issue. In these contexts, creatives struggle with ownership, compensation, and control. However, other occupations and forms of professional knowledge are being commodified as they are incorporated into training datasets. For example, Remotasks, a subsidiary company of Scale AI, demanded its contract data workers share datasets from their own daily business operations, which was used to train AI products that would be marketed to small businesses.⁵⁰ Operators’ conversational data in workplaces like call centers have similarly provided optimal “captive” settings for extracting more training data to build conversational AI, for which workers are often not compensated. Similarly, as researcher Milagros Miceli highlights, data workers are sometimes required to generate data themselves, becoming part of the systems that they build, including recording their voices or uploading personal photographs.⁵¹

Workers face two kinds of challenges over ownership and fair compensation. First is how independent workers can find ways to collectively challenge the amassment of their data. These issues pertain not only to the practices of AI companies but also to other corporate actors. For instance, some authors are now contending with book contracts that contain clauses allowing their books to be used to train AI. Informa, the parent company of academic publisher Taylor & Francis, struck a deal with Microsoft to sell the company access to its authors’

publications for this purpose. However, academics who have written under the publisher claim they were neither asked nor even informed about the deal.⁵²

Second, workers employed within organizations generally have little say over the content they produce. Much like the coercive dynamics that pressure workers to give up their data to employers, workers often have little leverage to refuse in relation to AI.⁵³ Major media companies including Time Inc., Vox Media, Condé Nast, and News Corp have entered licensing deals with OpenAI to allow them to use their writers' archives for LLM training. And media organizations themselves have used generative AI to repurpose their employees' content.⁵⁴ One popular tech blog used its former staff journalists' faces and names to continue publishing by running their old work through AI summarizers.⁵⁵ Labor journalist Hamilton Nolan has argued that such deals are equivalent to "selling your house for firewood," as news organizations accept short-term profits at the cost of longer-term harm to the media ecosystem and the sustainability of media companies.⁵⁶ In a British Academy report, researchers Kate Miltner and Tim Highfield point out that even in instances where more stakeholders have been brought into consultation and policymaking processes around AI, it is usually corporate interests such as record labels or film studios that are involved, rather than creative industry workers themselves.⁵⁷

In both cases — as independent freelancers or employees — there are limited legal mechanisms for recourse through which workers can regain some degree of autonomy over their data. Few workers have the time, resources, and finances to leverage lawsuits to challenge the uncompensated commodification of their work. Moreover, scholars have observed that US copyright law was not designed for nor equipped to address the kinds of harms that generative AI companies are now raising.⁵⁸ AI companies are also preempting such efforts: for example, OpenAI announced a "Copyright Shield" that would defend users and pay damages against any legal claims for copyright infringement that might arise from AI outputs.⁵⁹

Overall, workers whose data is being incorporated into generative AI's massive aggregation of human knowledge must grapple with the question of what kind of relationships they want to have with generative AI. Responses may vary widely from one industry to another. During the 2023 Writers' Guild contract negotiations, writers did not collectively advocate banning generative AI use in their industry, but instead pushed for writers' control over its use as a complementary tool, and how writers could receive full credit and compensation in ways that preserved their livelihoods.

Data Workforces Behind AI

Human labor is present at every stage of development and operation of AI and automated systems. In order for data to be usable to train AI systems, it must first be processed and annotated, and human oversight is needed to assess AI's output to further refine its performance. A plethora of scholarship, investigative journalism, and writing from workers themselves have explored the experiences of this immense workforce, which encompasses data annotators, content moderators, data entry workers, and people who do a variety of tasks on crowd-work platforms. Researchers Mary Gray and Siddarth Suri have coined the term

“ghost work” to describe this hidden, often unrecognized workforce that is distributed globally and across numerous outsourcing firms.⁶⁰

Recently, labor organizers within the tech sector have made efforts to push back against the exclusion of data workers from our understanding of who counts as a tech worker.⁶¹ While a tech company may formally employ only a few hundred workers, it relies on the work of tens of thousands of data workers. As workers consider the labor implications of AI within their own industries, this should include the data workforces and physical infrastructures that are rapidly expanding to meet computing needs and business demands.

Data workers generally face poor working conditions under outsourcing companies, including low wages and wage theft by employers,⁶² job insecurity,⁶³ and the suppression of labor organizing. Researcher Adrienne Williams discusses how these workforces are often recruited from vulnerable populations that can serve as “captive audiences,” such as prison inmates, refugee populations, and people from regions facing severe economic crises.⁶⁴ Projects like the Data Workers’ Inquiry, which features contributions from 16 data workers, highlight similarities in working conditions and workers’ experiences across four continents.⁶⁵ Moreover, outsourcing companies have been criticized for exploiting gaps in labor protections or outright violations of labor laws. In May 2024, data workers in Kenya published an open letter to President Biden outlining how US companies like Meta flout local labor laws while creating dismal working conditions and undermining worker organizing.⁶⁶ Researcher Julian Posada argues that emergent AI and labor regulation typically ignore data workers in both the client countries and the countries hosting the workforces.⁶⁷

One major issue affecting workplace conditions is the nature of the work itself. Cleaning, annotating, and debiasing datasets is one of the main mechanisms to mitigate AI’s discriminatory or negative impact. Similar to the outsourced work of content moderators for platforms like Facebook, producing training data that enables a system to recognize inappropriate language or images requires a workforce to manually label toxic content. Numerous investigations into these workforces in countries like Kenya⁶⁸ and Venezuela⁶⁹ highlight the severe psychological toll on workers who must review toxic content. One example of this has been OpenAI’s contract with Sama, an outsourcing firm in Kenya that required workers to manually review and label traumatizing content, including violence, hate speech, and sexual abuse material.⁷⁰

Lastly, the growth of generative AI entails not only expansion of the data annotation industry but also the physical infrastructures that power both the development and continued operations of AI systems. Like other computing processes, generative AI technologies are highly resource-intensive, as data centers require immense consumption of water and electricity. Such resource extraction projects are also labor concerns, because they affect local communities’ health and economic well-being. These issues came to the fore following the construction of a data center in a historically Black neighborhood in Memphis, Tennessee, to power Elon Musk’s artificial intelligence company, xAI. While xAI promised local officials that the center would bring job growth and economic development, community organizations have said that the company made no effort to recruit local residents or offer them workforce training, but instead placed strains on local grid infrastructure and contributed to industrial pollution in the area.⁷¹ More broadly, both local and global environmental issues have been a major

dimension of tech worker organizing. Tech employees have strived to hold their employers accountable as tech companies' growing investments in AI are undermining their own stated environmental goals to reduce their carbon footprints.⁷²

Commodification of Workers' Images and Voices

In addition to creatively produced content, the replication of individuals' faces, bodies, and voices raises specific challenges around workers' dignity, identity, and bodily autonomy that go beyond questions of ownership over content or creative styles. The reproduction of one's image or voice is certainly not new, as many professionals' unique faces and voices are a critical part of their work. However, these issues came to the forefront during the Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) negotiations, where the guild sought to secure a baseline of protections around the creation and use of digital replicas or digital alterations of performers, such as requiring informed consent, the right to information about specific uses of synthetic images, and the right to compensation for use of one's image.⁷³

Occupations with public visibility may have to grapple with this form of data commodification in the future. This includes voice actors, social media influencers, government workers and politicians, journalists, sex workers, athletes, and various other public-facing occupations. In general, workers have little control or transparency over how their images are commodified. And the ability to reduce costs by replicating a worker's image raises questions about unequal impact. Within the fashion industry, for instance, the availability of generative AI tools and 3D body scanning technologies has made it easier for brands to sidestep pay, contracts, and usage norms to use models' images indefinitely and without compensation. Simultaneously, AI companies have promised to help brands bring more diversity through the use of "diverse" AI-generated fashion images, which may result in fewer opportunities for models of color.⁷⁴ Similarly, within the music industry, researcher Enongo Lumumba-Kasongo has argued that the commodification of Black artists may lead to a future where they "may have to regularly contend with the use of AI to invoke Black voices and forms of expression in the absence of actual Black performers."⁷⁵ Rather than addressing underrepresentation, pay inequity, and racial discrimination, some industry actors may choose to sidestep these concerns with the aid of AI-generated content.

The personal nature of individuals' images and voices also raises questions about workers' dignity and bodily autonomy. With the wide availability of open-source AI image generators, nonconsensual image abuse has escalated as a tactic to harass, humiliate, or manipulate workers across a variety of professions. There have been several high-profile cases of AI manipulation of public figures, including the postmortem AI recreation of the late actor Robin Williams's face, and the use of actors' AI-generated voices to bypass the SAG-AFTRA strike.⁷⁶ Women and LGBTQIA+ public figures in particular have become vulnerable to AI deepfake pornography as a harassment tactic — including public figures such as singer Taylor Swift, Congresswoman Alexandria Ocasio-Cortez,⁷⁷ an investigative journalist,⁷⁸ and several actresses and social media influencers. Other tactics have been used to damage workers' reputations: in one case, several video game voice actors were harassed and doxxed online using

their synthetic voices to fabricate offensive content.⁷⁹ This raises serious concerns about the impact on workers with far less power and political leverage, and because calls to regulate AI image misuse tend to only focus on the most extreme cases. In the age of social media, political targeting of some occupations leaves workers vulnerable to mass digital harassment — among them, for example, reproductive care workers,⁸⁰ election workers,⁸¹ sex workers,⁸² and public school employees.⁸³

These emerging issues point to a future where labor unions, regulators, and platforms may need to consider workers' image rights as well as broader intersections between data collection, body autonomy, and dignity. Heavily unionized sectors have been able to gain some wins. Following the SAG-AFTRA/WGA strikes, SAG-AFTRA won some stipulations around obtaining actors' consent to use their likenesses or voices for AI, although the deal has faced criticism for containing potentially-exploitable loopholes.⁸⁴ The National Association of Voice Actors has advocated for contracts for performers that include consent, explicit limits on use of results and proceeds from AI/synthetic voice use, ability to opt out, and the storage and tracking of voice data.⁸⁵ In terms of regulation, states like California passed legislation that would require consent from the estates of deceased performers to use their digital likenesses.⁸⁶ At the federal and state levels, several bills have been put forward to combat non-consensual deepfakes.⁸⁷ However, while a baseline of informed consent may be a critical first step, major power and information asymmetries across industries remain symptomatic of broader challenges around pervasive worker datafication. The challenge may necessitate conceiving of new kinds of labor rights and protections — such as bans on perpetual usage rights or a right to “retire” one's synthetic image or voice.

Part Three: Embedding Generative AI in the Workplace

A major narrative around the emergence of generative AI has been that — as a versatile and accessible technology — anyone can adopt it to enhance their workflows. Artists and designers can produce dozens of fully fleshed-out images with the right prompts. White-collar professionals can save hours of their day by quickly assembling email responses. Teachers can brainstorm lesson plans and reallocate more time to their students. Workers can adopt generative AI as part of their everyday workflow. However, AI frequently enters the workplace through companies investing in AI, whether by integrating it into existing work applications, adopting specialized enterprise technologies, or, increasingly, placing informal expectations on employees to use such tools in their daily routines.

This section considers how we can critically interrogate some of the prevailing assumptions about how workers are using generative AI, what work is being automated and what isn't, where it builds on older practices of algorithmic control, and its role within broader organizational and financial trends within industries. The stakes of generative AI go beyond individual workers' choice to either harness its power or be "left behind." While many aspects of generative AI seem new, it reinforces vulnerabilities within the economy and society that many workers are familiar with: struggles over how work is valued and compensated, who has decision-making power, and who benefits.

Automation, Deskilling, and Devaluation

Whether AI will displace jobs has dominated discussions about generative AI. Similar to past waves of automation hype, various estimates have circulated. In mid-2023, consulting firm McKinsey predicted that 30 percent of work hours would be automated by 2030.⁸⁸ A year later, these projections were scaled back with more cautious, though still widely varying,

claims. In practice, automation rarely replaces human workers outright. Instead, it often partially automates specific skills or tasks and reconfigures how humans work alongside machines.⁸⁹ Proponents of generative AI highlight its ability to automate simple or repetitive tasks and assist in generating a “first draft,” enabling users to focus on more challenging work. While generative AI can augment work, it can also obscure new dynamics of extraction and devalue human effort.

As with past iterations of what scholar Astra Taylor calls “fauxtimation” — or the concealment of human labor behind automation — the output of generative AI often requires considerable reworking in order to appear to be labor-saving.⁹⁰ Copywriters are hired to edit and “re-humanize” poorly written, AI-generated text while being paid less for doing similar work they had done in the past under the rationale that they contribute less value.⁹¹ Workers are expected to take on responsibilities assumed to be seamlessly delegated to AI. An industry-wide survey report from *AP News* examining journalists’ adoption of generative AI found that in some cases it functioned, as one journalist respondent put it, much like self-service checkout, in that staff journalists are increasingly expected to do extra editing or proofreading work that would have otherwise gone out to contract freelancers.⁹²

In other cases, such as the growing use of AI chatbots, there is an assumption that generative AI can fully replicate what workers like customer service agents can do. In some cases, generative AI chatbots are similar to “autonomous” vehicles that require remote command centers where humans take the wheel when necessary.⁹³ They may conceal entire workforces who must learn to “speak” like a bot. Writer Laura Preston described her experience working as part of a team of human operators behind a real estate chatbot named Brenda. She describes her role as intertwined with Brenda’s machine intelligence: “I wasn’t so much taking over for her as I was turning cranks behind the curtain, nudging her this way and that. Our messages were little collaborations. We were a two-headed creature, neither of us speaking on our own, but passing the words between us.”⁹⁴ In other words, Preston, like other skilled workers, wasn’t just a backup to handle tasks the chatbot couldn’t manage; she was an integral part of the “intelligence” that powered the AI.

The devaluation of humans behind AI often conceals the extent of these human-machine collaborations and perpetuates a reductive understanding of skill and professional knowledge. Proponents have touted generative AI, in particular, as a breakthrough for its ability to replicate specific kinds of expertise, spawning speculations of future “AI doctors,” “AI lawyers,” and so forth. However, researchers have drawn attention to the prevalence of AI hallucinations, which can bring significant harm in high-stakes contexts. In a recent Stanford study, Matthew Dahl, Varun Magesh, Mirac Suzgun, and Daniel E. Ho found that common legal practice technologies like LexisNexis (Lexis+ AI) and Thomson Reuters (Westlaw AI-Assisted Research and Ask Practical Law AI) hallucinate between 17 percent and 33 percent of the time; they particularly struggled with accurate information about local law.⁹⁵ In one such instance, a New York court sanctioned two lawyers for submitting a legal brief that contained six hallucinated case citations.⁹⁶ In the health care context, an AI transcription tool used in hospitals was found to fabricate entire sections of text, including racial commentary and imaginary medical treatments.⁹⁷

However, the problems of AI “expertise” extend beyond the risks of committing strictly factual errors. Occupations are not merely collections of discrete, operationalizable tasks; they encompass ethical norms and standards, context-based knowledge, and institutional memory, as well as constantly shifting social networks and relationships. While AI chatbots can simulate complex human social interactions, it is often the nuanced, relational dimensions of social interactions that are most critical in navigating high-stakes occupational decision-making. In 2023, for instance, the National Eating Disorders Association laid off its helpline staff shortly after they voted to unionize, replacing them with a “wellness” chatbot.⁹⁸ But the nonprofit was forced to suspend the bot after it told people calling the eating disorder helpline to try losing weight.⁹⁹ AI-driven translation that misses cultural and context-based nuances can have similarly grave consequences; the growing use of AI translation rather than human interpreters in the US immigration system and international aid institutions has undermined asylum cases through both subtle and overt mistranslation.¹⁰⁰ These issues are exacerbated by the fact that LLMs perform poorly in non-English languages, particularly those from Global Majority countries.¹⁰¹

Finally, it is important to consider that when certain roles or tasks are automated, it may lead to inequitable outcomes. In industries where generative AI has resulted in job cuts, these have often disproportionately affected junior or entry-level positions. As researcher Molly Kinder points out, recent diversity gains in Hollywood have been concentrated in such roles, where more than 80 percent of entry-level staff were women and people of color, compared to only one-third of executive producers.¹⁰² A January 2024 survey commissioned by the Animation Guild found similar patterns among animation artists and writers: most layoffs affected entry-level and junior roles, which are often crucial pathways for people from underrepresented backgrounds to enter the industry and advance their careers. As a result, these trends may lead to a less diverse industry that primarily favors white men and the already affluent and well-connected.¹⁰³ Similarly, some law firms are eliminating paralegal and junior administrative positions, even though such roles may be important for skills training, experience-building, and professionalization pipelines within the legal field.¹⁰⁴ Other professions, such as software engineering, may face similar issues, as partial automation of tasks may remove opportunities for junior engineers to receive critical practice and learning through repetitive coding work.

AI and New Forms of Algorithmic Control

One dimension often overlooked in public discourse about generative AI is that beyond its potential to automate labor, its integration into pre-existing workflows can also regiment workers and further facilitate workplace datafication. Data is an integral part of work, and many employers manage workers through algorithms. Algorithmic management systems parse through many data points to arrive at automated decisions that are not transparent to workers. Capturing this data through worker surveillance systems allows for automation of task allocation, reorganization of workflows, disciplinary action, and other management decisions.¹⁰⁵ Although algorithmic systems affect frontline workers, employers are automating the responsibilities of managers who assign such tasks.

While many of these uses are still nascent, generative AI technologies are gradually coming into use in divisions like human resources, where “people management” software employs generative AI to aggregate disparate data about employees and output summaries of their activities, assess their behavior, or produce performance evaluations.¹⁰⁶ Generative AI is not only automating aspects of HR professionals’ jobs but also influencing how workers are managed, promoted, or evaluated and how workers perform in response to these systems.

Employers’ use of generative AI to sort and evaluate workers thus raises many of the same challenges around power, bias, and accountability, as do other automated decision-making systems, such as hiring algorithms and screening tools for government benefits.¹⁰⁷ In Nevada, for example, the state government contracted Google to use generative AI to analyze transcripts from unemployment appeals hearings and issue recommendations on whether claimants should receive benefits. But while such changes are promoted as essential for reducing application backlogs, critics counter that addressing any potential bias would require meaningful human review, which AI implementation seems poised to undermine.¹⁰⁸

A more extreme example of this can be found in call centers, where generative AI has been deployed in real-time to guide employees’ behavior, such as how they handle an interaction or their emotional responses.¹⁰⁹ In general, call center workers and similar customer service roles have long been subject to pervasive digital monitoring and automated management.¹¹⁰ In the past, companies like Cogito, which offers coaching and “behavioral analysis” software to monitor customer service workers, have been criticized for creating hostile, hyper-surveilled work environments.¹¹¹ The use of generative AI builds upon these practices by producing interpretations and judgments of workplace interactions. For example, IBM touts a variety of uses for generative AI to “summarize and analyze complaints, customer journeys, and more.”¹¹² Cogito itself recently announced the integration of generative AI to summarize and further quantify customer service interactions.¹¹³ Such software not only mines workers’ conversational data to train AI chatbots that may potentially replace them, but uses their past responses to generate scripts that manage and regiment their customer interactions.¹¹⁴ In other words, workers’ agency, professional judgment, and social interactions are increasingly restricted through such feedback loops.

Distinctions between technologies that augment work and those that manage workers may be further blurred with the growing use of AI assistants. In 2024, Uber announced it would launch an Open AI-powered chatbot in its driver-facing app that would provide drivers with “personalized answers” on questions around electric vehicle adoption.¹¹⁵ But while the chatbot’s current role is limited, the company’s track record of using drivers’ personalized data to steer their behavior and calculate pay rates raises questions about the extent to which such interfaces may deepen algorithmic control. The framing of chatbots as “assistants” rather than as algorithmic managers can potentially obscure the power dynamics that have allowed gig platform companies to distance themselves from the control they wield over their workforces. The opacity of these systems thus recall past challenges to algorithmic management around loss of control, unfair and discriminatory decisions, and a lack of avenues for recourse. However, what is novel in this context is how generative AI is being deployed to analyze large quantities of text and simulate human reasoning and interpretations in a way that can appear “intelligent,” or even infallible.

AI in the Context of Broader Business Models

AI is often invoked as an independent force that leads to seemingly inevitable outcomes, such as mass layoffs or declining working conditions. But such results do not happen in a vacuum. Existing economic models, social norms, and political conditions support how and whether new technologies are adopted. Often, decisions to introduce new technologies are only one component of much broader organizational and financial trends within industries.¹¹⁶ In some contexts, critics have drawn parallels between generative AI and the rise of gig platform companies, where the core “innovation” may have less to do with efficiency than a growing reliance on outsourced contractor labor, intensified workflows, and increased competition.¹¹⁷ Critically evaluating generative AI’s incorporation into workplaces should begin by asking what a particular tool allows employers to do, and what incentives are driving its adoption beyond promises of rising productivity.

For decades before the emergence of generative AI, journalists and screenwriters contended with rising job insecurity, inequitable payment models, and cyclical layoffs that were normalized with new business models. Media companies have been in crisis for years, as private equity takeovers gutted the staff and resources of news outlets in favor of short-term profits for parent companies.¹¹⁸ Nevertheless, several media companies have cited generative AI as the reason behind mass layoffs. After years of financial decline, Arena Group, which owns Men’s Journal and Sports Illustrated, announced that it would start publishing AI-generated articles at the same time as it announced another round of job cuts.¹¹⁹ Major media executives have identified AI as a way to operate newsrooms in leaner, more flexible ways.¹²⁰ Vice’s bankruptcy filing illustrates this trend, as the company restructured to a “studio model,” transitioning content production to social media and relying more on flexible contract labor.¹²¹ These decisions may have less to do with AI’s effectiveness at replacing human workers and more with the de-prioritization of certain operations and roles. In the video game industry, for example, many companies adopted generative AI as a cost-cutting measure, often sacrificing production quality and compensating for workforce attrition following layoffs.¹²²

In Hollywood, the shift toward streaming services has similarly affected TV writers, where uncertain residual payments, shortened production schedules, and “lean” writing rooms has led to lower pay and weakened bargaining power.¹²³ This is not a new phenomenon, but recalls other practices like algorithmically driven “lean scheduling” in retail, which shifts the workload burdens of understaffing on managers to handle routine tasks.

In other contexts, such practices are also justified by claims of labor shortages. In the nursing field, for example, NVIDIA and Hippocratic AI have claimed to address a shortage of nurses by implementing video calls with computer-generated animations that cost hospitals \$9 an hour. In contrast, National Nurses United (NNU), the largest organization of registered nurses in the US, has pointed to Bureau of Labor Statistics data that shows a major workforce surplus of actively licensed nurses.¹²⁴ Instead, NNU argues that healthcare executives have adopted policies of understaffing nurses in order to extract maximum profits while at the same time eroding working conditions, leading to reduced retention rates.¹²⁵

Other practices can shift risks and costs onto precarious subcontracted workers. An employer may decide that a position no longer contributes enough value to warrant full-time employment because part of that role's work is done with the aid of AI. In such cases, tasks might be broken into smaller components and divided between higher paid in-house work versus work that is contracted out. The rise of platforms like Upwork and Fiverr has created digital marketplaces that bring global workforces of freelancers who take on piecemeal gigs from clients. Workers on freelance gig platforms increasingly use generative AI for tasks like illustration, copywriting, translation, and coding.¹²⁶ However, generative AI may accelerate a "race to the bottom" as these workers face increased competition.¹²⁷ A Rest ofWorld investigation into outsourced freelance work in countries like Nigeria, Mexico, and the Philippines shows that globally, workers are facing increasing competitive pressures that drive down rates amid dwindling commissions.¹²⁸ In theory, augmenting work with AI could enable a designer to easily produce dozens of variations on an idea in rapid succession, but this does not mean that employers or clients will pay more for the larger number of outputs. Concept artist Karla Ortiz has written about being increasingly forced to compete with and "outbid" AI image generators in her dealings with clients.¹²⁹

Finally, we must consider how the introduction of new technologies intersects with broader labor politics and power relations. What do narratives about workers' disposability enable employers to do? While public interest in generative AI has largely focused on white collar and "creative" industries,¹³⁰ many corporate applications have targeted frontline low-wage, feminized, and racially stratified occupations. These are also sectors that have seen a recent surge in labor organizing, strikes, and mobilizations around stagnant wages and poor treatment during the COVID-19 pandemic. The discourse around generative AI has also furthered racist, classist assumptions that low-wage jobs are unskilled, low value, and easy to automate away. Automation has consistently been used as a threat to discourage workers from demanding too much from their employers: in 2016, McDonald's CEO stated that if the company's frontline employees demanded a \$15 minimum wage, they would be replaced by robots.¹³¹ Indeed, several major fast food retail companies have declared "AI-first" business strategies¹³² and have piloted experiments with generative AI. In 2022, McDonald's partnered with IBM to replace drive-through workers with chatbots. Although this was quickly abandoned due to poor performance, the company is continuing to pursue AI integrations.¹³³

Conclusion

This primer argues that the labor impact of generative AI spans a vast landscape of workforces, labor processes, and geographies, even as AI companies perpetuate the rhetoric that generative AI merely enhances efficiency and automates away drudgery. Frontline workers who increasingly interact with AI and those workers whose labor underpins the technology are finding ways to challenge AI's harmful impact, which includes new forms of control, devaluation of labor, deskilling, intensified work, and increased competition, among others.

But issues around compensation, working conditions, and job security also point to much broader emerging contradictions that lie at the heart of claims about generative AI's present and future capabilities. As generative AI companies pursue ambitions to automate everything from customer service to medical diagnoses, we cannot allow claims about generative AI's capabilities to go unchallenged. As this primer has shown, occupations are not merely clusters of tasks, and the replication of socially embedded professional knowledge is far from straightforward. Viewing generative AI's capabilities as a form of "creativity" hides the reality of what types of tasks and knowledge are being automated. More important questions to ask are: What do such claims obscure, and what are the underlying assumptions about what can and should be automated? Humans step in and compensate for technology's limitations, whether it is writers editing shoddy AI-generated text, remote workers steering a chatbot that cannot parse reality from hallucination, or data workers continually processing vast quantities of data in order for it to be fit for use. Yet while human labor is everywhere, such work becomes devalued and treated as a temporary stopgap before an assumed future of full automation. How AI is integrated into work raises important questions about the way we have constructed different categories of labor, the type of work that is performed, and what work and workers are deemed valuable or disposable.

Generative AI does not exist outside of current economic conditions of industries and their attendant inequalities and power dynamics. Within industries like media publishing, health care, service work, and the entertainment industry, generative AI has frequently been introduced as a means to cut costs, to shift work to less costly contract workers, and to intensify practices of extracting more value from workers by collecting their data. This raises questions

about the sustainability, quality, and equity of both existing occupations as well as new configurations of work.

A critical dimension of the devaluation of work has been the reduction of people's labor to data, suggesting a need to envision more expansive rights and protections with regard to worker data. Workers are experiencing an accelerated loss of control around when and how their data is extracted and used. Moreover, the distinctions between workers who are users of AI versus those who help build it behind the scenes are becoming increasingly blurred. Yet a very small, powerful number of tech companies own the models and the computing power necessary to build today's generative AI technologies and fund its future development. Future advancements of AI will continue to rely on data collected in the workplace, as the development of enterprise tools rely on workers as an iterative data source for future models. Further down the line, this can lead to worsening working conditions, greater precarity, and even displacement. However, AI regulation to date has not resulted in comprehensive data rights in the US. In contexts like the EU where data privacy rights have been codified, "data" often narrowly refers to personally identifiable information. There is an opportunity to more expansively define "data rights" to include both industrial data and personally identifying information. This is especially important given that AI companies have made no distinction between private and public information in their mass scraping of data.

Lastly, unequal impact across industries requires a broader range of actors to address workers' relationship to AI. This is particularly true for industry-specific concerns, such as setting ethical and professional norms¹³⁴ and workplace standards. The labor implications of generative AI intersect with collective social goods, as AI technologies are integrated into fields like health care, education, government services, journalism, and law. In addition to contract discussions, labor unions and worker advocates may be able to negotiate with technology companies to take a high road on worker protections that set the standard for the entire industry.¹³⁵ Others have developed AI principles, such as the Communications Workers of America¹³⁶ and the National Nurses United, which published a "Nurses and Patients' Bill of Rights." The latter combines issues around professional norms and workplace standards because nurses' expertise in ethically implementing new technologies directly affects the quality of patient care.¹³⁷ Governments must also play a leadership role, not only in regulating workplace AI but in setting rules and norms for public sector use of AI; the city of Boston, for instance, has produced guidelines for government employees on the use of generative AI.¹³⁸

If future advancements in AI will rely on the extraction of more work data, this is a pivotal moment. Generative AI will continue to raise new challenges around expertise, compensation, accountability, and professional ethics. As entirely new systems of automation become a part of workplaces, unchecked surveillance and data collection intensifies, and lack of data rights allows for corporate ownership of material, reputational, and biometric data without worker consent, we need guardrails that address these changing power dynamics. Such considerations should be a central part of public discourse regarding broader regulation of generative AI.

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Endnotes

- 1 Jack Kelley, “Goldman Sachs Predicts 300 Million Jobs Will Be Lost Or Degraded By Artificial Intelligence,” *Forbes*, March 31, 2023, <https://www.forbes.com/sites/jackkelly/2023/03/31/goldman-sachs-predicts-300-million-jobs-will-be-lost-or-degraded-by-artificial-intelligence/>.
- 2 Michael Chui, Eric Hazan, Roger Roberts, Alx Singla et. al, *The Economic Potential of Generative AI: The Next Productivity Frontier*, (McKinsey Digital, June 14, 2023), <http://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#introduction>.
- 3 Jeff Maggioncalda, “How to harness generative AI and other emerging technologies to close the opportunity gap,” World Economic Forum, June 21, 2024, <https://www.weforum.org/agenda/2024/06/genai-emerging-technologies-digital-skills/>.
- 4 Brian Eastwood, “Sam Altman believes AI will change the world (and everything else),” MIT Sloan, May 8, 2024, <https://mitsloan.mit.edu/ideas-made-to-matter/sam-altman-believes-ai-will-change-world-and-everything-else>.
- 5 Nik Popli, “The AI Job That Pays Up to \$335K — and You Don’t Need a Computer Engineering Background,” *Time Magazine*, April 14, 2023, <https://time.com/6272103/ai-prompt-engineer-job/>.
- 6 Paolo Confino and Amber Burton, “A.I. might not replace you, but a person who uses A.I. could,” *Fortune*, April 25, 2023, <https://fortune.com/2023/04/25/artificial-intelligence-ai-replace-humans-prompt-engineers-chatgpt/>.
- 7 Christopher Manning, “Artificial Intelligence Definitions,” Stanford Human-Centered Artificial Intelligence, Stanford University, September 2020, <https://hai.stanford.edu/sites/default/files/2020-09/AI-Definitions-HAI.pdf>.
- 8 Adam Zewe, “Explained: Generative AI,” *MIT*, November 9, 2023, <https://news.mit.edu/2023/explained-generative-ai-1109>.
- 9 “What is generative AI?” IBM, April 20, 2023, <https://research.ibm.com/blog/what-is-generative-AI>; George Lawton, “What is generative AI? Everything you need to know,” *TechTarget*, n.d. <https://www.techtarget.com/searchenterpriseai/definition/generative-AI>.
- 10 Manning, “Artificial Intelligence Definitions.”
- 11 James Vincent, “Forty percent of ‘AI startups’ in Europe don’t actually use AI, claims report,” *The Verge*, March 5, 2019, <https://www.theverge.com/2019/3/5/18251326/ai-startups-europe-fake-40-percent-mmc-report>.

- 12 Theo Wayt, “Amazon’s grocery stores to drop just walk out checkout tech,” *The Information*, April 2, 2024, <https://www.theinformation.com/articles/amazons-grocery-stores-to-drop-just-walk-out-checkout-tech>.
- 13 Adrienne Williams, and Milagros Miceli, “Data Work and its Layers of (In)visibility,” Just Tech, Social Science Research Council, September 6, 2023, doi.org/10.35650/JT.3060.d.2023.
- 14 Williams and Miceli, “Data Work and Layers of [In]visibility.”
- 15 Jeremy B. Merrill and Rachel Lerman, “What do people really ask of chatbots? It’s a lot of sex and homework,” *The Washington Post*, August 4, 2024, <https://www.washingtonpost.com/technology/2024/08/04/chatgpt-use-real-ai-chatbot-conversations/>.
- 16 Jake Coyle, “In Hollywood writers’ battle against AI, humans win (for now),” *The Associated Press*, September 27, 2023, <https://apnews.com/article/hollywood-ai-strike-wga-artificial-intelligence-39ab72582c3a15f77510c9c30a45ffc8>
- 17 Erik Brynjolfsson, Danielle Li, and Lindsey Raymond, “Generative AI at Work,” *National Bureau of Economic Research Work Paper Series*, no. W31161 (Nov 2023):1–65, https://www.nber.org/system/files/working_papers/w31161/w31161.pdf.
- 18 “Generative AI use cases,” Google Cloud, accessed October 22, 2024, <https://cloud.google.com/use-cases/generative-ai#improve-developer-efficiency>.
- 19 “Zoom Workplace Takes AI to the Next Level,” Zoom, last modified July 18, 2024, https://www.zoom.com/en/blog/ask-zoom-ai-companion/?cms_guid=false&lang=en-US.
- 20 “Slack AI has arrived,” Slack, February 14, 2024, <https://slack.com/blog/news/slack-ai-has-arrived>.
- 21 Colin Lecher, “NYC’s AI Chatbot Tells Businesses to Break the Law,” *The Markup*, March 29, 2024, <https://themarkup.org/news/2024/03/29/nycs-ai-chatbot-tells-businesses-to-break-the-law>.
- 22 Eirini Kalliamvakou, “Research: Quantifying GitHub Copilot’s impact on developer productivity and happiness,” GitHub Blog, September 7, 2022, <https://github.blog/news-insights/research/research-quantifying-github-copilots-impact-on-developer-productivity-and-happiness/>.
- 23 Bernard Marr, “The Amazing Ways Duolingo is Using AI and GPT-4,” *Forbes*, April 29, 2023, <https://www.forbes.com/sites/bernard-marr/2023/04/28/the-amazing-ways-duolingo-is-using-ai-and-gpt-4/>.
- 24 Marr, Bernard, “How Generative AI is Revolutionizing Customer Service,” *Forbes*, January 26, 2024, <https://www.forbes.com/sites/bernardmarr/2024/01/26/how-generative-ai-is-revolutionizing-customer-service/>.

- 25 Josh Taylor, “Adobe to integrate AI into Photoshop amid fears of job loss and mass faking of images,” *The Guardian*, May 23, 2023, <https://www.theguardian.com/technology/2023/may/23/adobe-to-integrate-ai-into-photoshop-amid-fears-of-job-losses-and-mass-faking-of-images>.
- 26 Ashley Belanger, “AI ruling on jobless claims could make mistakes courts can’t undo, experts warn,” *Ars Technica*, September 10, 2024, <https://arstechnica.com/tech-policy/2024/09/ai-ruling-on-jobless-claims-could-make-mistakes-courts-cant-undo-experts-warn/>.
- 27 “What are AI Agents?” Amazon, accessed October 22, 2024, <https://aws.amazon.com/what-is/ai-agents/>.
- 28 Krystal Hu, “ChatGPT sets record for fastest-growing user base,” *Reuters*, February 2, 2023, <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/>.
- 29 Karen Hao, “The messy, secretive reality behind OpenAI’s bid to save the world,” *MIT Technology Review*, February 17, 2020, <https://www.technologyreview.com/2020/02/17/844721/ai-openai-moonshot-elon-musk-sam-altman-greg-brockman-messy-secretive-reality/>.
- 30 “Microsoft and OpenAI extend partnership,” Microsoft, January 23, 2023, <https://blogs.microsoft.com/blog/2023/01/23/microsoftandopenaiextendpartnership/>.
- 31 Erin Griffith and Cade Metz, “Inside the Funding Frenzy at Anthropic, One of A.I.’s Hottest Start-Ups,” *The New York Times*, February 20, 2024, <https://www.nytimes.com/2024/02/20/technology/anthropic-funding-ai.html>.
- 32 Rachel Metz, “AI Startup Hugging Face Valued at \$4.5 Billion After Raising Funding From Google, Nvidia,” *Bloomberg News*, August 24, 2023, <https://www.bloomberg.com/news/articles/2023-08-24/ai-startup-hugging-face-valued-at-4-5-billion-after-fundraising>.
- 33 Jai Vipra and Sarah Myers West, *Computational Power and AI*, (AI Now Institute, September 27, 2023), <https://ainowinstitute.org/publication/policy/compute-and-ai>.
- 34 Kelvin Chan, “Microsoft quits OpenAI board seat as antitrust scrutiny of artificial intelligence pacts intensifies,” *AP News*, July 10, 2024, <https://apnews.com/article/microsoft-openai-artificial-intelligence-b5b91acc60ada508278fc1152ced186>.
- 35 Leyland Cecco, “Air Canada ordered to pay customer who was misled by airline’s chatbot,” *The Guardian*, February 16, 2024, <https://www.theguardian.com/world/2024/feb/16/air-canada-chatbot-lawsuit>.
- 36 Sourav Banarjee, Ayushi Agarwal, and Saloni Singla, “LLMs will always hallucinate and we need to live with this,” *arXiv preprint arXiv:2409.05746* (September 2024), <https://arxiv.org/abs/2409.05746>.

- 37 Gary Marcus and Reid Southern, “Generative AI has a visual plagiarism problem: Experiments with Midjourney and DALL-E3 show a copyright minefield,” *IEEE Spectrum*, January 6, 2024, <https://spectrum.ieee.org/midjourney-copyright>.
- 38 Arun Soni, “AI Models Force Media Firms to Pick Licensing or Litigation,” *Bloomberg News*, August 5, 2024, <https://news.bloomberglaw.com/ip-law/generative-ai-forces-media-firms-to-pick-licensing-or-litigation>.
- 39 Iliia Shumailov, Zakhar Shumaylov, Yiren Zhao, Nicolas Papernot, Ross Anderson, and Yarin Gal. “AI models collapse when trained on recursively generated data,” *Nature* 631, no. 8022 (2024): 755-759. <https://www.nature.com/articles/s41586-024-07566-y>.
- 40 Rashi Shrivastava, “Search Startup Perplexity Increasingly Cites AI-Generated Sources,” *Forbes*, June 26, 2024, <https://www.forbes.com/sites/rashishrivastava/2024/06/26/search-startup-perplexity-increasingly-cites-ai-generated-sources/>.
- 41 Hanlin Li, Nicholas Vincent, Stevie Chancellor, and Brent Hecht, “The Dimensions of Data Labor: A Road Map for Researchers, Activists, and Policymakers to Empower Data Producers,” *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency*, <https://doi.org/10.1145/3593013.3594070>.
- 42 Nick Couldry, and Ulises A. Mejias, “Data colonialism: Rethinking big data’s relation to the contemporary subject,” *Television & New Media* 20, no. 4 (2019): 336-349, <https://doi.org/10.1177/15274764187966>.
- 43 “More than 15,000 Authors Sign Authors Guild Letter Calling on AI Industry Leaders to Protect Writers,” Authors Guild, July 18, 2023, <https://authorsguild.org/news/thousands-sign-authors-guild-letter-calling-on-ai-industry-leaders-to-protect-writers/>.
- 44 Ariel Bogle, “New York Times, CNN and Australia’s ABC block OpenAI’s GPTBot web crawler from accessing content,” *The Guardian*, August 24, 2023, <https://www.theguardian.com/technology/2023/aug/25/new-york-times-cnn-and-abc-block-openais-gptbot-web-crawler-from-scraping-content>.
- 45 Tonya Riley, “The FTC’s biggest AI enforcement tool? Forcing companies to delete their algorithms,” *CyberScoop*, July 5, 2023, <https://cyberscoop.com/ftc-algorithm-disgorgement-ai-regulation/>.
- 46 Min Chen, “Artists and Illustrators Are Suing Three A.I. Art Generators for Scraping and ‘Collaging’ Their Work Without Consent,” *ArtNet*, January 24, 2023, <https://news.artnet.com/art-world/class-action-lawsuit-ai-generators-deviantart-midjourney-stable-diffusion-2246770>.

- 47 Noor al-Sibai, “Another OpenAI Executive Choked When Asked if Sora was Trained on AI Data,” *Futurism*, May 13, 2024, <https://futurism.com/the-byte/openai-executive-choked-sora-youtube>.
- 48 Kyle Wiggers, “YouTuber files class action suit over OpenAI’s scrape of creators’ transcripts,” *Tech Crunch*, August 5, 2024, <https://techcrunch.com/2024/08/05/youtuber-files-class-action-suit-over-openai-scrape-of-creators-transcripts/>.
- 49 Alex Reisner, “Search the YouTube Videos Secretly Powering Generative AI,” *Proof News*, July 16, 2024, <https://www.proofnews.org/youtube-ai-search/>.
- 50 Sam Blum, “A Scale AI Subsidiary Targeted Small Businesses for Data to Train an AI. Entrepreneurs Threatened Legal Action to Get Paid,” *Inc.*, August 28, 2024, <https://www.inc.com/sam-blum/a-scale-ai-subsidiary-targeted-small-businesses-for-data-to-train-an-ai-entrepreneurs-threatened-legal-action-to-get-paid.html>.
- 51 Adrienne Williams and Milagros Miceli, “Data Work and its Layers of (In)visibility,” Just Tech, Social Science Research Council, September 6, 2023, doi.org/10.35650/JT.3060.d.2023, <https://just-tech.ssrc.org/articles/data-work-and-its-layers-of-invisibility/>.
- 52 Matilda Battersby, “Academic authors ‘shocked’ after Taylor & Francis sells access to their research to Microsoft AI,” *The Bookseller*, July 19, 2024, <https://www.thebookseller.com/news/academic-authors-shocked-after-taylor--francis-sells-access-to-their-research-to-microsoft-ai>.
- 53 Alexandra Mateescu, “Challenging Worker Datafication,” Data & Society Research Institute, November 8, 2023, <https://datasociety.net/library/challenging-worker-datafication/>.
- 54 Todd Spanlger, “Condé Nast Inks Pact With OpenAI, Latest Media Company to License Content to Generative AI Platform,” *Variety*, August 20, 2024, <https://variety.com/2024/digital/news/conde-nast-openai-licensing-deal-1236112556/>.
- 55 Jason Koebler, “A Beloved Tech Blog Is Now Publishing AI Articles Under the Names of Its Old Human Staff,” *404 Media*, July 9, 2024, <https://www.404media.co/a-beloved-tech-blog-tuaw-is-now-publishing-ai-articles-under-the-names-of-its-old-human-staff/>.
- 56 Hamilton Nolan, “Selling Your House For Firewood,” Substack, May 23, 2024, <https://www.hamiltonnolan.com/p/selling-your-house-for-firewood>.

- 57 Kate Miltner and Tim Highfield, “The Possibilities of ‘Good’ Generative AI in the Cultural and Creative Industries,” *The British Academy*, <https://www.thebritishacademy.ac.uk/documents/5509/Digital-Society-Miltner-Highfield.pdf>.
- 58 Harry H. Jiang, Lauren Brown, Jessica Cheng, Mehtab Khan, Abhishek Gupta, Deja Workman, Alex Hanna, Johnathan Flowers, and Timnit Gebru. “AI Art and its Impact on Artists,” *Proceedings of the 2023 AAAI/ACM Conference on AI, Ethics, and Society (AIES ‘23)*, <https://dl.acm.org/doi/10.1145/3600211.3604681>; Micaela Mantegna, “ARTificial: Why Copyright Is Not the Right Policy Tool to Deal with Generative AI,” *Yale Law Journal* 133 (2023): 1126, <https://www.yalelawjournal.org/forum/artificial-why-copyright-is-not-the-right-policy-tool-to-deal-with-generative-ai>.
- 59 Bill Rosenblatt, “OpenAI’s Copyright Shield Is Business As Usual For Enterprise IT,” *Forbes*, November 7, 2023, <https://www.forbes.com/sites/billrosenblatt/2023/11/07/openais-copyright-shield-is-business-as-usual-for-enterprise-it/>.
- 60 Mary L. Gray and Siddharth Suri, *Ghost work: How to stop Silicon Valley from building a new global underclass* (Eamon Dolan Books, 2019).
- 61 Nataliya Nedzhvetskaya and J. S. Tan. “Labor’s Stake in Shaping Tech Futures,” *Interactions* 31, no. 4 (2024): 50-53, <https://dl.acm.org/doi/pdf/10.1145/3665990>.
- 62 Sam Blum, “‘It’s a Scam.’ Accusations of Mass Non-Payment Grow Against Scale AI’s Subsidiary, Outlier AI,” *INC*, <https://www.inc.com/sam-blum/its-a-scam-accusations-of-mass-non-payment-grow-against-scale-ais-subsidiary-outlier-ai.html>.
- 63 Rebecca Tan and Regine Cabato, “Behind the AI boom, an army of overseas workers in ‘digital sweatshops,’” *The Washington Post*, August 28, 2023, <https://www.washingtonpost.com/world/2023/08/28/scale-ai-remotasks-philippines-artificial-intelligence/>.
- 64 Adrienne Williams, “Zombie Trainers and a New Era of Forced Labor,” *Newsweek*, May 3, 2023, <https://www.newsweek.com/zombie-trainers-new-era-forced-labor-opinion-1896624>.
- 65 “Data Workers Inquiry,” Data Workers, accessed October 22, 2024, <https://data-workers.org/>.
- 66 “Open letter to President Biden from tech workers in Kenya,” *Foxglove*, May 22, 2024, <https://www.foxglove.org.uk/open-letter-to-president-biden-from-tech-workers-in-kenya/>.
- 67 Julian Posada, “On a More Comprehensive Governance of Artificial Intelligence,” Just Tech, Social Science Research Council, August 7, 2024, doi.org/10.35650/JT.3072.d.2024.

- 68 Karen Hao, “Cleaning Up ChatGPT Takes Heavy Toll on Human Workers,” *The Wall Street Journal*, July 24, 2023, <https://www.wsj.com/articles/chatgpt-openai-content-abusive-sexually-explicit-harassment-kenya-workers-on-human-workers-cf191483>.
- 69 Karen Hao and Andrea Paola Hernández, “How the AI industry profits from catastrophe,” *MIT Technology Review*, April 20, 2022, <https://www.technologyreview.com/2022/04/20/1050392/ai-industry-appen-scale-data-labels/>.
- 70 Billy Perrigo, “OpenAI Used Kenyan Workers on Less Than \$2 Per Hour to Make ChatGPT Less Toxic,” *Time*, January 18, 2023, <https://time.com/6247678/openai-chatgpt-kenya-workers/>.
- 71 Andrew R. Chow. “Elon Musk’s New AI Data Center Raises Alarms Over Pollution,” *Time Magazine*, September 17, 2024, <https://time.com/7021709/elon-musk-xai-grok-memphis/>.
- 72 Tamara Kneese and Meg Young, “Carbon Emissions in the Tailpipe of Generative AI,” *Harvard Data Science Review Special Issue* no. 5, (June 2024), <https://doi.org/10.1162/99608f92.fbd6128>.
- 73 Kalia Richardson, “Inside the Strike-Breaking WGA Contract: AI, Streaming, and Staffing,” *Rolling Stone*, September 27, 2023, <https://www.rollingstone.com/tv-movies/tv-movie-features/wga-amptp-contract-writers-strike-streaming-ai-staffing-1234833467/>.
- 74 Maliha Shoaib, “AI models are here. Can they actually improve fashion representation?” *Vogue Business*, April 25, 2023, <https://www.voguebusiness.com/technology/ai-models-are-here-can-they-actually-improve-fashion-representation>.
- 75 Enongo Lumumba-Kasongo, “(A) I, Rapper: Who Voices Hip-Hop’s Future?” *Public Books*, April 21, 2022, <https://www.publicbooks.org/ai-rap-synthesis-tools-black-hip-hop/>.
- 76 Joy Saha, “AI versions of Tom Hanks and the late Robin Williams used without their consent,” *Salon*, October 2, 2023, <https://www.salon.com/2023/10/02/ai-tom-hanks-robin-williams/>.
- 77 Rebecca Clar, “‘This is sexual violence’: Ocasio-Cortez boosts bill to tackle AI deepfake porn,” *The Hill*, May 29, 2024, <https://thehill.com/policy/technology/4692020-this-is-sexual-violence-ocasio-cortez-boosts-bill-to-tackle-ai-deepfake-porn/>.
- 78 Rana Ayyub, “I Was The Victim Of A Deepfake Porn Plot Intended To Silence Me,” *The Huffington Post*, November 21, 2018, https://www.huffingtonpost.co.uk/entry/deepfake-porn_uk_5bf2c126e4b0f32bd58ba316.
- 79 Joseph Cox, “Video Game Voice Actors Doxed and Harassed in Targeted AI Voice Attack,” *Vice*, February 13, 2023, <https://www.vice.com/en/article/voice-actors-doxed-with-ai-voices-on-twitter/>.

- 80 Jasmine Mithani, “Personal data is easier to get than ever. Reproductive health workers are at risk,” *19th News*, April 29, 2024, <https://19thnews.org/2024/04/doxxing-personal-data-reproductive-health-care-workers/>.
- 81 Christine Zhu, “Threats, harassment of election workers have risen, poll shows,” *Politico*, May 1, 2024, <https://www.politico.com/news/2024/05/01/2024-election-poll-workers-00154953>.
- 82 Kat Tenbarge, “Conservative Influencers are using AI to cover up photos of sex workers,” *NBC News*, February 6, 2024, <https://www.nbc-news.com/tech/internet/conservative-influencers-are-using-ai-cover-photos-sex-workers-rcna137341>.
- 83 Olina Banerji, “Deepfakes Expose Public School Employees to New Threats,” *EducationWeek*, May 8, 2024, <https://www.edweek.org/leadership/deepfakes-expose-public-school-employees-to-new-threats/2024/05>.
- 84 Charles Pulliam-Moore, “SAG-AFTRA’s new contract hinges on studios acting responsibly with AI,” *The Verge*, November 18, 2023, <https://www.theverge.com/2023/11/18/23962349/sag-aftra-tentative-agreement-generative-artificial-intelligence-vote>.
- 85 National Association of Voice Actors, “Synthetic/AI Voices,” National Association of Voice Actors, <https://navavoices.org/synth-ai/>.
- 86 Cynthia Littleton, “California Passes Law Requiring Consent for AI Digital Replicas of Dead Performers,” *Variety* (blog), August 31, 2024, <https://variety.com/2024/tv/news/california-ai-dead-performers-consent-sag-aftra-1236126432/>.
- 87 Michelle Graham, “Deepfakes: Federal and State Regulation Aims to Curb a Growing Threat,” Thomson Reuters Institute, accessed October 22, 2024, <https://www.thomsonreuters.com/en-us/posts/government/deepfakes-federal-state-regulation/>.
- 88 Paolo Confino, “Generative A.I. will upend the workforce, McKinsey says, forcing 12 million job switches and automating away 30% of hours worked in the U.S. economy by 2030,” *Fortune*, July 27, 2023, <https://fortune.com/2023/07/27/how-many-jobs-generative-ai-switches-mckinsey-outlook-economy/>.
- 89 Pegah Moradi and Karen Levy, “The Future of Work in the Age of AI: Displacement or Risk-Shifting?” in *Oxford Handbook of Ethics of AI*, ed. Markus Dubber, Frank Pasquale, and Sunit Das (Oxford University Press, 2020), 271-87.
- 90 Astra Taylor, “The Automation Charade,” *Logic(s) Magazine*, August 1, 2018, <https://logicmag.io/failure/the-automation-charade/>.
- 91 Thomas Germain, “AI took their jobs. Now they get paid to make it sound human,” *BBC News*, June 16, 2024, <https://www.bbc.com/future/article/20240612-the-people-making-ai-sound-more-human>.

- 92 Nicholas Diakopoulos et. al, Generative AI in Journalism: *The Evolution of Newswork and Ethics in a Generative Information Ecosystem* (AP News, April 2024),16. <https://www.ap.org/solutions/artificial-intelligence/local-news-ai/>.
- 93 Cade Metz et. al, “How Self-Driving Cars Get Help From Humans Hundreds of Miles Away,” *The New York Times*, September 4, 2024, <https://www.nytimes.com/interactive/2024/09/03/technology/zoom-self-driving-cars-remote-control.html>.
- 94 Laura Preston, “Human Fallback,” *N Plus One Magazine*, Issue 44: Middlemen, Winter 2023, https://www.nplusonemag.com/issue-44/essays/human_fallback/.
- 95 Magesh, Varun, Faiz Surani, Matthew Dahl, Mirac Suzgun, Christopher D. Manning, and Daniel E. Ho, “Hallucination-Free? Assessing the Reliability of Leading AI Legal Research Tools,” *arXiv preprint arXiv:2405.20362* (2024), https://dho.stanford.edu/wp-content/uploads/Legal_RAG_Hallucinations.pdf.
- 96 Sara Merken, “New York Lawyers Sanctioned for Using Fake ChatGPT Cases in Legal Brief,” *Reuters*, June 22, 2023, <https://www.reuters.com/legal/new-york-lawyers-sanctioned-using-fake-chatgpt-cases-legal-brief-2023-06-22/>.
- 97 Allison Koenecke, Anna Seo Gyeong Choi, Katelyn X. Mei, Hilke Schellmann, and Mona Sloane. “Careless Whisper: Speech-to-Text Hallucination Harms,” in *The 2024 ACM Conference on Fairness, Accountability, and Transparency*, 1672-1681.
- 98 Brittany Nguyen, “Helpline Workers for the National Eating Disorders Association say they are being replaced by AI,” *Business Insider*, May 26, 2023, <https://www.businessinsider.com/eating-disorders-non-profit-reportedly-fired-humans-offer-ai-chatbot-2023-5>.
- 99 Julie Jargon, “A Chatbot Was Designed to Help Prevent Eating Disorders. Then It Gave Dieting Tips,” *The Wall Street Journal*, June 1, 2023, <https://www.wsj.com/articles/eating-disorder-chatbot-ai-2aecb179>.
- 100 Carey L. Biron, “AI’s ‘insane’ translation mistakes endanger US asylum cases,” *Context News*, September 18, 2023, <https://www.context.news/ai/ais-insane-translation-mistakes-endanger-us-asylum-cases>.
- 101 Gabriel Nicholas and Aliya Bhatia, “Lost in Translation: Large Language Models in Non-English Content Analysis,” Center for Democracy & Technology, May 23, 2023, <https://cdt.org/insights/lost-in-translation-large-language-models-in-non-english-content-analysis/>.

- 102 Molly Kinder, “Hollywood writers went on strike to protect their livelihoods from generative AI. Their remarkable victory matters for all workers,” *Brookings Institution*, April 12, 2024, <https://www.brookings.edu/articles/hollywood-writers-went-on-strike-to-protect-their-livelihoods-from-generative-ai-their-remarkable-victory-matters-for-all-workers/>.
- 103 Animation Guild, “Future Unscripted: The Impact of Generative AI on Entertainment Industry Jobs,” <https://animationguild.org/wp-content/uploads/2024/01/Future-Unscripted-The-Impact-of-Generative-Artificial-Intelligence-on-Entertainment-Industry-Jobs-pages-1.pdf>.
- 104 Tom Davenport, “Early Adopters of Generative AI in Law,” *Forbes*, June 1, 2024, <https://www.forbes.com/sites/tomdavenport/2024/06/01/early-adopters-of-gen-ai-in-law/>.
- 105 Alexandra Mateescu and Aiha Nguyen, *Algorithmic Management in the Workplace* (Data & Society Research Institute, February 6, 2019), <https://datasociety.net/library/explainer-algorithmic-management-in-the-workplace/>.
- 106 Dave Zielinski, “How HR Is Using Generative AI in Performance Management,” *SHRM*, August 8, 2023, <https://www.shrm.org/topics-tools/news/technology/how-hr-using-generative-ai-performance-management>.
- 107 Grant Fergusson, *Outsourced and Automated: How AI Companies Have Taken Over Government Decision-Making*, (EPIC, September 14, 2023) <https://epic.org/wp-content/uploads/2023/09/FINAL-EPIC-Outsourced-Automated-Report-w-Appendix-Updated-9.26.23.pdf>; Lucas Wright et. al., “Null Compliance: NYC Local Law 144 and the challenges of algorithm accountability,” *FaccT ’24: Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency*, (June 2024):1701–1713, <https://doi.org/10.1145/3630106.3658998>.
- 108 Todd Feathers, “Google’s AI Will Help Decide Whether Unemployed Workers Get Benefits,” *Gizmodo*, September 10, 2024, <https://gizmodo.com/googles-ai-will-help-decide-whether-unemployed-workers-get-benefits-2000496215>.
- 109 Virginia Doellgast, Sean O’Brady, Jeonghun Kim, and Della Walters, “AI in Contact Centers: Artificial intelligence and algorithmic management in frontline service workplaces,” *Cornell ILR School*, 2023, <https://ecommons.cornell.edu/server/api/core/bitstreams/a0ac9f50-5a22-4b3d-a9d9-2cc06824e31d/content>.
- 110 Winifred R. Poster, “Emotion detectors, answering machines, and e-unions: Multi-surveillances in the global interactive service industry,” *American Behavioral Scientist* 55, no. 7 (2011): 868–901, <https://doi.org/10.1177/00027642114078>.

- 111 Wolfie Christl, *Surveillance and Algorithmic Control in the Call Center*, (Cracked Labs, May 2023), https://crackedlabs.org/dl/CrackedLabs_Christl_CallCenter.pdf.
- 112 “Transforming customer service: How generative AI is changing the game,” *IBM*, July 17, 2023, <https://www.ibm.com/think/topics/generative-ai-for-customer-service>.
- 113 “Cogito Introduces Real-Time Supervisor Alerts and Generative AI-Driven Smart Summaries for Agents to Drive Operational Excellence in the Contact Center,” *Business Wire*, June 20, 2023, <https://www.businesswire.com/news/home/20230620235625/en/Cogito-Introduces-Real-Time-Supervisor-Alerts-and-Generative-AI-Driven-Smart-Summaries-for-Agents-to-Drive-Operational-Excellence-in-the-Contact-Center>.
- 114 Emma Goldberg, “Training My Replacement: Inside a Call Center’s Battle with A.I.,” *The New York Times*, July 18, 2023, <https://www.nytimes.com/2023/07/19/business/call-center-workers-battle-with-ai.html>.
- 115 Rebecca Bellan, “Uber to launch OpenAI-powered AI assistant to answer driver EV questions,” *Tech Crunch*, October 8, 2024, <https://techcrunch.com/2024/10/08/uber-to-launch-openai-powered-ai-assistant-to-answer-driver-ev-questions>.
- 116 David F. Noble, “Social choice in machine design: The case of automatically controlled machine tools, and a challenge for labor,” *Politics & Society* 8, no. 3-4 (1978): 313–347, <https://doi.org/10.1177/0032329278008003>.
- 117 Andrew Wolf, “The WGA Strike Is a Fight Against Silicon Valley’s Gigification of the Entire Economy,” *Jacobin*, May 8, 2023, <https://jacobin.com/2023/05/wga-writers-guild-of-america-strike-silicon-valley-gigification-economy-residuals>.
- 118 “Private equity is buying up America’s newspapers,” *The Economist*, February 17, 2023, <https://www.economist.com/graphic-detail/2022/02/17/-private-equity-is-buying-up-americas-newspapers>.
- 119 Frank Landymore, “Sports Illustrated Lays Off Journalists After Announcing Pivot to AI Content,” *Futurism*, February 2, 2023, <https://futurism.com/the-byte/sports-illustrated-lays-off-journalists-ai-content>.
- 120 Nikki Main, “BuzzFeed News is Shutting Down,” *Gizmodo*, April 20, 2023, <https://gizmodo.com/buzzfeed-news-shutting-down-lay-offs-1850357443>.
- 121 Christopher Palmeri, “Vice Media Will No Longer Publish Stories on Its Website,” *Bloomberg News*, February 22, 2024, <https://news.bloomberglaw.com/bankruptcy-law/vice-media-will-no-longer-publish-stories-on-its-website>.

- 122 Brian Merchant, “AI Is Already Taking Jobs in the Video Game Industry,” *WIRED*, July 23, 2024, <https://www.wired.com/story/ai-is-already-taking-jobs-in-the-video-game-industry/>.
- 123 Andrew Wolf, “The WGA Strike Is a Fight Against Silicon Valley’s Gigification of the Entire Economy,” *Jacobin*, May 8, 2023, <https://jacobin.com/2023/05/wga-writers-guild-of-america-strike-silicon-valley-gigification-economy-residuals>.
- 124 National Nurses United, “Memo: There is no ‘shortage,’ but there is a serious hospital staffing Crisis,” May 15, 2023, https://www.nationalnursesunited.org/sites/default/files/nnu/documents/Reporter_Memo_Hospital_Staffing_Crisis.pdf.
- 125 National Nurses United, “Protecting Our Front Line Ending the Shortage of Good Nursing Jobs and the Industry-created Unsafe Staffing Crisis,” December 2021, https://www.nationalnursesunited.org/sites/default/files/nnu/documents/1121_StaffingCrisis_ProtectingOurFrontLine_Report_FINAL.pdf.
- 126 Ozge Demirci, Jonas Hannane, Xinrong Zhu, “Ozge Demirci, Jonas Hannane, Xinrong Zhu, “Who Is AI Replacing? The Impact of Generative AI on Online Freelancing Platforms,” (October 12, 2023), <http://dx.doi.org/10.2139/ssrn.4602944>.
- 127 Carl Benedikt Frey and Michael Osborne, “Generative AI and the Future of Work: a Reappraisal,” *Brown Journal of World Affairs*, no. 1 (fall/Winter 2023): 1–17, <https://bjwa.brown.edu/30-1/generative-ai-and-the-future-of-work-a-reappraisal/>.
- 128 Andrew Deck, “The Workers at the Frontlines of the AI Revolutions,” *Rest of World*, July 11, 2023, <https://restofworld.org/2023/ai-revolution-outsourced-workers/>.
- 129 Paris Marx, “How artists are fighting generative AI,” *Disconnect*, February 23, 2024, <https://disconnect.blog/how-artists-are-fighting-generative-ai/>.
- 130 Ray A. Smith, “AI is Starting to Threaten White-Collar Jobs,” *The Wall Street Journal*, February 12, 2024, <https://www.wsj.com/lifestyle/careers/ai-is-starting-to-threaten-white-collar-jobs-few-industries-are-immune-9cdbcb90>.
- 131 Jana Kasperkevic, “Ex-McDonald’s CEO Suggests Replacing Employees with Robots amid Protests,” *The Guardian*, May 25, 2016, <https://www.theguardian.com/us-news/2016/may/25/former-mcdonalds-ceo-threatens-replace-employees-robots>.
- 132 Belle Lin, “Taco Bell and Pizza Hut Are Going ‘AI-First,’ Yum’s New Tech Chief Says,” *The Wall Street Journal*, April 1, 2024, <https://www.wsj.com/articles/taco-bell-and-pizza-hut-are-going-ai-first-yums-new-tech-chief-says-2f423d5e>.

- 133 Paul Kunert, “IBM adds side order of NLP to McDonald’s AI drive-thru chatbots,” *The Register*, May 20, 2022, <https://www.theregister.com/2022/05/30/ibm/>.
- 134 “ABA issues first ethics guidance on lawyer’s use of AI tools,” *American Bar Association*, July 29, 2024, <https://www.americanbar.org/news/abanews/aba-news-archives/2024/07/aba-issues-first-ethics-guidance-ai-tools/>; “Generative AI Practical guidance,” The State Bar of California, <https://www.calbar.ca.gov/Portals/0/documents/ethics/Generative-AI-Practical-Guidance.pdf>; Alex Mahadevan, “Associated Press cements the AI era with newsroom guidance,” Poynter, August 16, 2023, <https://www.poynter.org/ethics-trust/2023/new-ap-style-book-guidelines-artificial-intelligence-chatgpt/>.
- 135 Cynthia Littleton, “SAG-AFTRA Strikes Groundbreaking AI Digital Voice Replica Pact With Startup Firm Narrativ,” *Variety*, August 14, 2024, <https://variety.com/2024/digital/news/sag-aftra-ai-narrativ-voice-replica-digital-ads-1236106301/>.
- 136 “Report to the CWA Executive Board on AI Principles and Recommendations,” Communications Workers of America, November 2023, https://cwa-union.org/sites/default/files/2023-12/202311_report_to_the_cwa_executive_board_on_ai_principles_and_recommendations.pdf.
- 137 “Nurses and Patients’ Bill of Rights: Guiding Principles for A.I. Justice in Nursing and Health Care,” *National Nurses United*, December 20, 2023, https://www.nationalnursesunited.org/sites/default/files/nnu/documents/0424_NursesPatients-BillOfRights_Principles-AI-Justice_flyer.pdf.
- 138 “City of Boston Interim Guidelines for Using Generative AI,” City of Boston, May 18, 2023, <https://www.boston.gov/sites/default/files/file/2023/05/Guidelines-for-Using-Generative-AI-2023.pdf>.

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